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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,365	03/16/2001	Yeong-Taeg Kim	SAM1.0084	9213

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EXAMINER

SHANNON, MICHAEL R

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/810,365	Applicant(s) KIM, YEONG-TAEG	
	Examiner Michael R. Shannon	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 11-21, filed 7 February 2005, with respect to the rejection(s) of claim(s) 1-22 under 35 USC 102(b) as being anticipated by Lawler (USP 5,585,838) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kim (USP 5,432,558), previously cited by examiner.

Specifically, the Applicant points out the fact that the Preview Program and the Broadcasting Schedule Information (both of which relate to the Main Program) are not delivered simultaneously, and therefore, do not meet the claimed invention. This, in fact, is correct. The examiner has withdrawn the rejection based on Lawler in view of the fact that each and every limitation as set forth in the claims was not met by the reference.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 9-10, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (USP 5,432,558), cited previously by examiner.

Art Unit: 2614

To serve as a brief overview, the Kim reference discloses a system that uses codes inserted into the video signal to set time and reserve program recording based on user indication during a preview program.

Regarding claim 1, the claimed "receiver for a digital video service network" is met as follows:

- The claimed "means for receiving a digital television signal from a transmission channel, the digital television signal including Preview Program and Broadcasting Schedule Information, the Preview Program and the Broadcasting Schedule Information relating to a Main Program" is met by the delivery of the program notice broadcasting (a commercial or preview regarding a program to be transmitted at a later time) with the code for recording or reminding when the actual program is to air [col. 4, lines 40-48].
- The claimed "means for decoding the digital television signal" is met by the decoder, which serves to decode the video signal at the video receiver [col. 4, lines 7-14].
- The claimed "means for providing an output signal reflective of the Preview Program for display" is met by the discussion of the user watching the TV during a program notice broadcasting [col. 4, lines 44-64].
- The claimed "means for downloading the Broadcasting Schedule Information while the Preview Program is being decoded and displayed" is met by the program reservation code being decoded from the video signal

during display of the program notice broadcasting, based on user input
[col. 4, lines 44-54].

Regarding claim 2, the claimed "means for demodulating the received digital television signals and extracting bit streams describing the digital television signal" is met by the demodulator 82 at the receiving circuit for receiving program notice broadcasting and regular broadcasting [col. 6, lines 25-27].

Regarding claim 3, the claimed "TS demultiplexer for demultiplexing and outputting a signal representative of the Preview Program" is met by the fact that the code is multiplexed during the encoding phase into the VBI of the video signal or inserted into an empty frequency band of the video signal [col. 5, lines 3-10 & lines 57-58], which inherently teaches a demultiplexer at the decoding step for extracting the code information from the signal.

Regarding claim 4, the claimed fact that the aforementioned "TS demultiplexer outputs the Broadcasting Schedule Information" is met by the decoding of the code and the inherent demultiplexing from the signal in order to extract it from the signal [col. 4, lines 7-14 & col. 6, lines 25-32].

Regarding claim 5, the claimed "System and Schedule Manager for controlling the means for decoding, the System Manager further directing a data stream flow of data from the digital television signal" is met by the reservation circuit keeping track of the program reservation information decoded from the code [col. 4, lines 51-54].

Regarding claim 6, the claimed "Digital Storage Device for receiving, storing and replaying data reflective of the Main Program, the Main Program being related to the

Art Unit: 2614

Preview Program and the Main Program being described by the Broadcasting Schedule Information" is met by the VTR storage device for storing the main program related to the program notice broadcasting and the reservation code [col. 4, lines 15-20 & lines 56-64].

Regarding claim 9, the claimed "Broadcasting Schedule Information including information describing the Main Program, including channel number and start time" is met by the fact that the code has channel information and time information for reservation of recording a program [col. 4, lines 42-44].

Regarding claim 10, the claimed "Schedule Queue for receiving at least the start time of the Broadcasting Schedule Information, the start time being compared with a system clock to determine when to have control signals sent to instruct the receiver to process the Main Program" is met by the reservation circuit and it's ability to check the system clock and automatically turn on the TV and VTR at the time corresponding to the time information of the code and record the main program to the tape in the VTR or other video recording machine [col. 5, lines 41-46].

Regarding claim 23, the claimed "Broadcasting Schedule Information is delivered to the means for receiving a digital television signal simultaneously with the Preview Program" is met by the fact that the reservation code is sent in the VBI of the program notice broadcasting, therefore, they are delivered simultaneously [col. 4, lines 40-46].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2614

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8, and 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (USP 5,432,558), cited previously by examiner.

Regarding claim 7, the Kim reference teaches all of that which is discussed above with regards to claim 1. However, the reference does not teach the claimed "application decoder for decoding audio and video coded bit streams of the Preview Program or the Main Program, the Audio/Video decoders sending an Audio output signal for transducing into sound and a decoded video signal for processing and display". The Examiner takes Official Notice that it is notoriously well known in the art to send audio signals through a transducer and video signals through a decoder for the purposes of listening and viewing real-time or pre-recorded audio/video signal. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include application decoders for decoding the audio and video of the Preview Program or the Main Program, in order to allow the user to view and listen to programs in a real-time or time-shifted manner. The application decoders are needed for any type of A/V signal, in order to arrive at the desired user-viewable material.

Regarding claim 8, the Kim reference teaches all of that which is discussed above with regards to claim 7. However, the reference does not teach the claimed "means for generating an icon to overlay the video output of the decoded video signal during display". The Examiner takes Official Notice that it is notoriously well known in

Art Unit: 2614

the art to provide video overlay functionality to video processing systems for the purpose of overlaying GUI information or information that is presentable to the user and related to the program being viewed. In view of the "RSVP icon" functionality, the Kim reference does disclose turning on a display lamp to indicate that this program notice broadcast can be reserved for recording later by the press of a remote control button [col. 4, lines 46-54]. Therefore, in view of the above Official Notice, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include video overlay functionality for placing an icon on the decoded video, in order to notify the user of reservation information and provide them with the ability to reserve the program for recording or viewing later during the Main Program airing time.

Regarding claim 11, the Kim reference teaches all of that which is discussed above with regards to claim 10. However, the reference does not teach the claimed "ability to notify the viewer that the start time is approaching and requesting an instruction as to whether the viewer desires that the Main program be recorded or displayed". The Examiner takes Official Notice that it is notoriously well known in the art to provide notification of an upcoming program record time-slot so that the user can take appropriate action and decide whether viewing or recording is the option that they wish to pursue. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include a notification of upcoming start time, in order to notify the user of reservation information and provide them with the ability to decide is viewing or recording the program is the option for them.

Art Unit: 2614

Regarding claim 12, the Kim reference teaches all of that which is discussed above with regards to claim 11. However, the reference does not teach the claimed "means for notifying providing an instruction to record if the viewer does not input any instruction within a predetermined time". The Examiner takes Official Notice that it is notoriously well known in the art to provide notification of an upcoming program record time-slot so that the user can take appropriate action and decide whether viewing or recording is the option that they wish to pursue and further to select a default selection after a pre-determined amount of time. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include a notification of upcoming start time with a default selection, in order to notify the user of reservation information and provide them with the ability to decide is viewing or recording the program is the option for them and to automatically choose an option upon no response from the user after a pre-determined amount of time.

Regarding claim 13, the Kim reference teaches all of the following, without reference to the use of MPEG-2 for encoding purposes.

- The claimed step of "providing a Preview Program, the Preview Program relating to a Main Program" is met by the program notice broadcasting (preview regarding a program to be transmitted at a later time) [col. 4, lines 44-46].
- The claimed step of "providing Broadcasting Schedule Information relating the Main Program" is met by the reservation code having channel

Art Unit: 2614

information and time information for recording a main program related to the program notice broadcasting [col. 4, lines 40-45].

- The claimed step of “coding the Preview Program into an MPEG-2 signal” is not met by Kim, however, will be discussed further below.
- The claimed step of “embedding the Broadcasting Schedule Information into the MPEG-2 signal such that the Broadcasting Schedule Information will be received by a digital television receiver while the Preview Program is being decoded by the digital television receiver” is met by the program reservation code being decoded from the video signal during display of the program notice broadcasting, based on user input [col. 4, lines 44-54].

The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 14, the claimed step of “coding a notice into the MPEG-2 signal, the notice being applied by the receiver in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the Preview Program and the Broadcasting Schedule Information” is met by the fact that the code and the program

Art Unit: 2614

notice broadcasting are sent to the receiver simultaneously so as to enable to user to schedule recordings of the upcoming main program [col. 4, lines 40-46]. The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 15, the Kim reference teaches all of that which is discussed above with regards to claim 14. However, the Kim reference does not expressly disclose, "wherein the notice is an icon simultaneously displayed with the Preview Program". The Kim reference does disclose turning on a display lamp simultaneously with the display of the program notice broadcasting to indicate that this program notice broadcast can be reserved for recording later by the press of a remote control button [col. 4, lines 46-54]. The Examiner takes Official Notice that it is notoriously well known in the art to provide icon video overlay functionality to video processing systems for the purpose of overlaying GUI information or information that is presentable to the user and related to the program being viewed. Therefore, in view of the above Official Notice, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include video overlay functionality for placing an icon on the decoded video, in order to notify the user of reservation information and provide

Art Unit: 2614

them with the ability to reserve the program for recording or viewing later during the Main Program airing time.

Regarding claim 16, the Kim reference teaches all of the following, without reference to the use of MPEG-2 for encoding purposes.

- The claimed “Preview Program coded within the MPEG-2 signal, the Preview Program relating to a Main Program” is met by the program notice broadcasting (preview regarding a program to be transmitted at a later time) [col. 4, lines 44-46].
- The claimed “Broadcasting Schedule Information embedded within the MPEG-2 signal, the Broadcasting Schedule Information relating to the Main Program” is met by the reservation code having channel information and time information for recording a main program related to the program notice broadcasting [col. 4, lines 40-45].
- The claimed step of “Broadcasting Schedule Information being embedded into the MPEG-2 signal such that the Broadcasting Schedule Information will be received by a digital television receiver while the Preview Program is being decoded by the digital television receiver” is met by the program reservation code being decoded from the video signal during display of the program notice broadcasting, based on user input [col. 4, lines 44-54].

The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital

Art Unit: 2614

television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 17, the claimed "notice coded into the MPEG-2 signal, the notice being applied by the receiver in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the Preview Program and the Broadcasting Schedule Information" is met by the fact that the code and the program notice broadcasting are sent to the receiver simultaneously so as to enable to user to schedule recordings of the upcoming main program [col. 4, lines 40-46]. The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 18, the Kim reference teaches all of that which is discussed above with regards to claim 17. However, the Kim reference does not expressly disclose, "wherein the notice is an icon simultaneously displayed with the Preview Program". The Kim reference does disclose turning on a display lamp simultaneously

with the display of the program notice broadcasting to indicate that this program notice broadcast can be reserved for recording later by the press of a remote control button [col. 4, lines 46-54]. The Examiner takes Official Notice that it is notoriously well known in the art to provide icon video overlay functionality to video processing systems for the purpose of overlaying GUI information or information that is presentable to the user and related to the program being viewed. Therefore, in view of the above Official Notice, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include video overlay functionality for placing an icon on the decoded video, in order to notify the user of reservation information and provide them with the ability to reserve the program for recording or viewing later during the Main Program airing time.

Regarding claim 19, the Kim reference teaches all of the following, without reference to the use of MPEG-2 for encoding purposes.

- The claimed step of “displaying a program coded within the MPEG-2 signal, the Program relating to a related item of choice for the viewer” is met by the display of the program notice broadcasting, which is related to the program to be transmitted at a later time [col. 4, lines 40-46].
- The claimed step of “receiving ordering information embedded within the MPEG-2 signal simultaneously with the display of the program, the ordering information relating to the item of choice, and the ordering information allowing a viewer to select the item while the program is being displayed” is met by the reservation code embedded in the video signal

having channel information and time information for recording a main program related to the program notice broadcasting [col. 4, lines 40-45].

The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 20, the claimed step of "providing a notice to a viewer, the notice being applied to the viewer in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the program and the ordering information" is met by the fact that the code and the program notice broadcasting are sent to the receiver simultaneously so as to enable to user to schedule recordings of the upcoming main program [col. 4, lines 40-46]. The Kim reference does not provide any mention of the fact that the coding is done using MPEG-2. The Examiner takes Official Notice that it is notoriously well known in the art to utilize MPEG-2 for encoding purposes in a digital television delivery system. Therefore, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to utilize MPEG-2 as the encoding scheme, in order to use already existing

Art Unit: 2614

technology and utilize a standard for transmitting video that is already widely accepted in the art.

Regarding claim 21, the Kim reference teaches all of that which is discussed above with regards to claim 20. However, the Kim reference does not expressly disclose, "wherein the notice is an icon simultaneously displayed with the program". The Kim reference does disclose turning on a display lamp simultaneously with the display of the program notice broadcasting to indicate that this program notice broadcast can be reserved for recording later by the press of a remote control button [col. 4, lines 46-54]. The Examiner takes Official Notice that it is notoriously well known in the art to provide icon video overlay functionality to video processing systems for the purpose of overlaying GUI information or information that is presentable to the user and related to the program being viewed. Therefore, in view of the above Official Notice, the examiner submits that it would have been fairly obvious to one of ordinary skill in the art at the time of the invention to include video overlay functionality for placing an icon on the decoded video, in order to notify the user of reservation information and provide them with the ability to reserve the program for recording or viewing later during the Main Program airing time.

Regarding claim 22, the Kim reference teaches all of that which is discussed above with regards to claim 19. Furthermore, the claim that the program is the Preview Program is met by the program notice broadcasting being a preview regarding a program to be transmitted at a later time [col. 4, lines 44-46]. The claim that the item of choice is the associated Main Program is met by the fact that the program to be

Art Unit: 2614

transmitted at a later time can be reserved using the program notice broadcasting and the reservation code [col. 4, lines 40-46]. The claim that the ordering information is the Broadcasting Schedule Information is met by the fact that the reservation code provides channel and time information for reservation of recording a program [col. 4, lines 40-46].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Shannon whose telephone number is (571) 272-7356. The examiner can normally be reached Monday through Friday 8:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (571) 272-7353.

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Art Unit: 2614

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **(571) 272-2600**.

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
May 24, 2005


JOHN MILLER
SUPERVISORY PATENT EXAMINER
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